

Quiz 2.1-2.4 Tomorrow!

2.1 Segment Bisects

B is the midpoint

ex
AB = 7

$$BC = 7$$

$$AC = 14$$

ex
AC = 12

$$AB = 6$$

$$BC = 6$$

ex
AB = $3x + 5$
CB = 26

$$3x + 5 = 26$$

$$3x = 21$$

$$x = 7$$

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Find the midpoint.

C(-3, 8)

D(-7, 5)

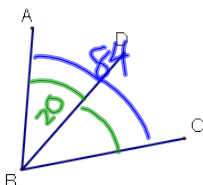
$$M\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$$

$$\left(\frac{-3 + -7}{2}, \frac{8 + 5}{2}\right)$$

$$\left(-5, \frac{13}{2}\right)$$

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2.2 Angle Bisectors

 \overrightarrow{BD} bisects $\angle ABC$ EX
 $m\angle ABD = 20$
 $m\angle ABC =$

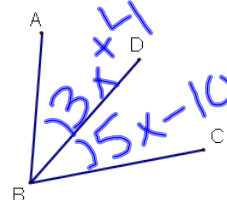
$$46$$

EX
 $m\angle ABC = 84$
 $m\angle DBC =$

$$42$$

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2.2 Angle Bisectors

 \overrightarrow{BD} bisects $\angle ABC$ EX
 $m\angle ABD = 3x + 4$
 $x =$ $m\angle DBC = 5x - 10$

$$-3x + 4 = 5x - 10$$

$$4 = 2x - 10$$

$$14 = 2x$$

$$7 = x$$

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2.3 Complementary and Supplementary

$$m\angle MNO = 50$$

$$90 - 50 = 40$$

Complement? 40

$$180 - 50 = 130$$

Supplement? 130

$$m\angle MNO = 47$$

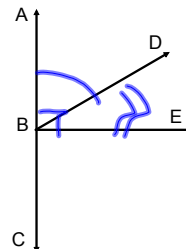
$$90 - 47 = 43$$

Complement? 43

$$180 - 47 = 133$$

Supplement? 133

Are the angles complementary, supplementary, or neither?



$\angle ABD$ & $\angle DBC$

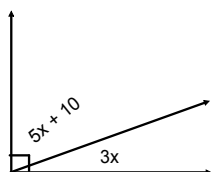
$\angle ABC$ & $\angle CBE$

$\angle ABD$ & $\angle DBE$

S
N
C

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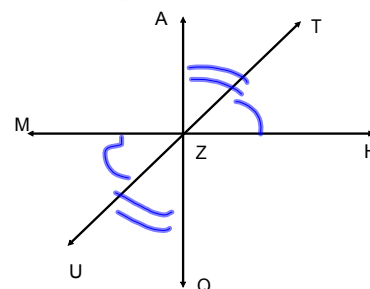
$$5x + 10 + 3x = 90$$

$$8x + 10 = 90$$

$$8x = 80$$

$$x = 10$$

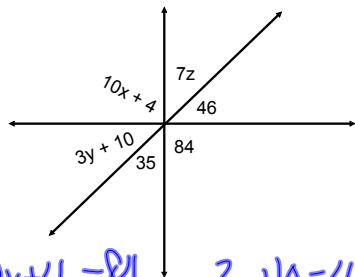
2.4 Vertical Angles and Linear Pair



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2.4 Vertical Angles and Linear Pair

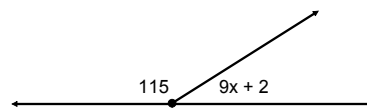


$$10x + 4 = 84$$

$$7z = 35$$

$$3y + 10 = 46$$

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$$9x + 2 + 115 = 180$$

$$9x + 117 = 180$$

$$\begin{array}{r} 9x + 117 = 180 \\ -117 \quad -117 \\ \hline 9x = 63 \end{array}$$

$$x = 7$$

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